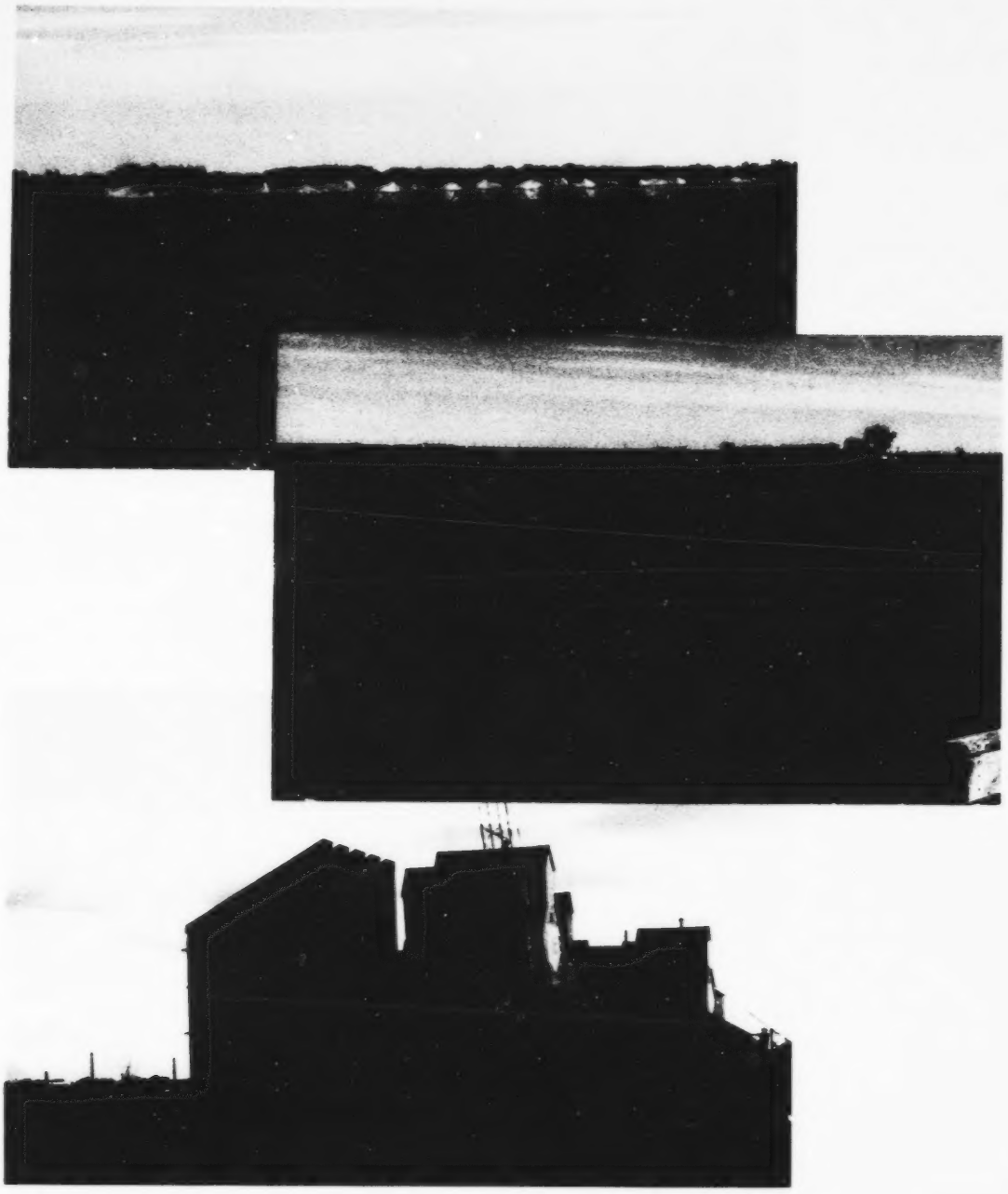
PARTS OF THE ORIGINAL DOCUMENT

ARE OF POOR REPRODUCTIVE QUALITY

CERTAINES PARTIES DU DOCUMENT ORIGINAL

SONT DE PIÈTRE QUALITÉ DE REPRODUCTION



The Alberta Agriculture Research Trust 1984-1985

Annual Report

The Alberta Agricultural Research Trust 1984-1985

Annual Report

Chairman's Report

In 1984-85, the Alberta Agricultural Research Trust authorized support for 24 projects. Since its inception in 1966, the Trust has supported 438 projects which have been allocated $6.8 million in funding support. This total includes matching funds contributed by the private sector.

The Board of Trustees arrives at decisions utilizing a number of guidelines. One guideline, above all, is crucial —that all research supported by the Alberta Agricultural Research Trust be relevant to Alberta's agricultural industry. The Board feels its efforts in this regard have continued to be successful.

The policy of the Trust is to optimize the use of the Trust's available funding and to spur development of new sources of research support. Success in developing other sources of financing and promotion of an increased involvement by private industry has encouraged research managers to develop projects that are approved by both the Trust and the private sector. The Board of Trustees continued to require that the majority of AART projects for 1984-85 obtain matching funding from industry.

Alberta Agriculture provides support to the Trust and complements the input of funds from the private sector. A $500,000 grant from Alberta Agriculture began the AART's first operational funding. The Department has continued to grant the Trust a minimum of $250,000 each year to continue its research support efforts.

On behalf of the Board of Trustees of the Alberta Agricultural Research Trust, I extend our appreciation to the participating research scientists, the Grants Committee and to those organizations and businesses which have risen to the challenge and provided strong financial support to agricultural research activities in Alberta during the past year.

H.B. McEwen
Chairman, Board of Trustees.

BOARD OF TRUSTEES
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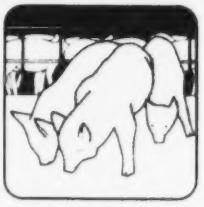
PROJECTS COMPLETED BETWEEN OCTOBER 1983 AND 1984



The names of private industry contributors are noted, where appropriate, following the project title.

ANIMAL SCIENCE

AHERNE, F.X.

Canola meal as a protein supplement for starting pigs
(Canola Council of Canada)

A series of experiments (3) were undertaken to determine the replacement value of canola meal for soybean meal in the diets of starting pigs (6-20 kg liveweight). Diets were based on barley and wheat and canola meal replaced 0, 25, 50, 75 and 100% of the protein supplied by soybean meal on an iso-nitrogenous basis.

In experiment one, the results indicated that with 3 week-weaned pigs fed to 10 kg liveweight on 20% crude protein diets, average daily gain and average daily feed were reduced ($P<0.05$) when canola meal replaced more than 50% of the protein. In experiment two, pigs were weaned at 3 weeks and fed 20% crude protein diets to 20 kg liveweight. The results showed that canola meal can replace 25% of protein without significantly affecting pig performance. In experiment three, average daily feed and average daily gain of 5 week-weaned pigs fed on 18% crude protein diets were depressed ($P<0.05$) when canola meal replaced more than 25% of the protein. Feed conversion efficiency was not affected by the level of the canola meal in the diets. Regression analysis of the average daily gain and average daily feed on percent canola meal in the diet for the trials indicated that for each one percent addition of canola meal to the diet, average daily gain and average daily feed were linearly reduced by 2 and 4 g, respectively.

These studies indicated that canola meal (approximately 8% in the diet) can replace 25% of the protein supplied by soybean meal supplement without significantly affecting the growth rate or the feed conversion efficiency of starting pigs.

AHERNE, F.X.

Effect of feeding level after weaning on reproductive efficiency in sows
(Alberta Pork Producers Marketing Board)

Ninety-nine multiparous sows were fed a 16% protein diet to appetite during lactation. The sows were weaned 28 days after farrowing and were randomly allotted to one of nine dietary treatments. The diets consisted of a 3 x 3 factorial arrangement of three protein levels and three energy levels. The sows were fed 2 kg feed per day from the day after weaning until the day after mating at the first post-weaning estrus. Subsequent reproductive performance of the sows was not significantly affected by the post-weaning feeding level of protein and energy.

AHERNE, F.X.

Effect of flavour additives on utilization of canola meal
(Canola Council of Canada)

Four experiments were conducted to determine the effect of flavour additives (Hy Sugr ADE and Pig Krave) on the utilization of canola meal by starting pigs. In experiment one, pigs offered flavoured pelleted feed containing 35.3% canola meal ate (8%) more ($P<0.05$) than pigs offered the non-flavoured diet. Pigs offered non-pelleted feed in experiment two ate (7%) more ($P<0.05$) of the flavoured diet containing 35.3% canola meal as a complete replacement for soybean meal than the non-flavoured diet containing the same level of canola meal. The preference of starting pigs for flavoured or non-flavoured diets was investigated with pelleted and non-pelleted feed in experiment three and four respectively. The corresponding increase in feed intake of flavoured diets containing 0, 17.6 and 35.3 percent canola meal in the diet were 29, 26 and 21 percent for experiment four. The relatively high cost of flavoured diets seems to reduce the benefit that may result from supplementing canola meal with flavour additives.

FOOD SCIENCE

JELEN, P.

Enzymatic lactose hydrolysis in development of a sterilizable whey based fruit drink (George Cringle-Palm Dairies Research Foundation)

The objective of this project was to investigate effectiveness of several β-galactosidase enzymes for hydrolysing lactose in cottage cheese whey.

Six commercial enzyme preparations were compared, based on parameters obtained from the kinetic characteristics of the enzymes in lactose solutions (Michaelis-Menten constants, apparent turnover numbers, initial reaction rates and integrated equations derived from the Michaelis-Menten expression), and on experimental progress curves for the hydrolysis of lactose in whey. The conversion data were used to predict optimum enzyme dosage/hydrolysis time combinations to attain a fixed degree of lactose conversion. The lactose hydrolysis efficiency in cottage cheese whey was different for each enzyme. The use of acid β-galactosidases did not impart any undesirable sensory characteristics to a grapefruit flavoured prototype product developed in the laboratory. Sensory evaluation experiments showed that no significant difference in bitterness between a prototype product sweetened with sucrose and several drinks made from whey treated with any one of the three best acid β-galactosidases to an 80% lactose hydrolysis level. Based on the results obtained and an economic evaluation of the commercial preparations, the most suitable β-galactosidase preparations available for use in cottage cheese whey were identified.

Effectiveness of the lactose hydrolysis in ultrafiltration permeate was compared to that in whey with one of the enzymes studied. No hindrance by the whey proteins present was observed, however, the ultrafiltration approach was not pursued further as per the agreement with the industrial collaborator involved.

This study demonstrated that it should be possible to manufacture a lactose hydrolysed whey beverage without protein sedimentation problems and with acceptable sensory characteristics. The cost of the enzyme required to carry out the lactose hydrolysis would be about 3 or 4 cents per litre of whey, under the conditions described in this work.

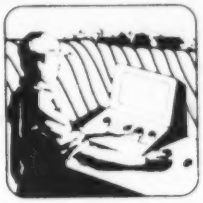
OORAIKUL, B.

Development of recombined potato skins for the manufacture of instant baked potatoes (I & S Produce Ltd.)

An edible film has been developed from natural food ingredients to closely resemble natural potato skins in appearance, color and texture. The film thickness, color and strength may be varied to suit a broad range of product requirements by varying some processing parameters. It may be molded into any desired shape and size. In the present development the film was molded to resemble a half-tuber shape, filled with cooked, mashed and possibly pregarnished potatoes and frozen. Freezing was first done cryogenically to set the outer layers of the product before being completed in an air-blast furnace.

The product requires 4-5 minutes reheating in a microwave oven, or 10-15 minutes in a regular oven before serving. Sensory tests revealed significant acceptance by consumers. The plan is now in place to conduct a market survey of the product prior to a pilot plant development and test. A patent for the product and processing technique has been filed both in Canada and the United States.

RURAL ECONOMY



NORBY, R.R.

Meat price relationships
(Alberta Pork Producers Marketing Board)

The objective of this study was to evaluate the pricing efficiency of the marketing channels for the beef and pork sectors in Canada. The study employed the concept of Granger causality along with univariate residual cross correlation analysis in order to assess the nature of lead-lag price relationships in the Canadian beef and pork sectors. The direction of price change within the channel along with the time lag involved has implications for pricing efficiency.

From derived demand theory, it was expected that retail prices would lead both wholesale and farmgate prices and that wholesale prices would lead farmgate prices for both beef and pork. The autocorrelation in each price series was filtered using an ARIMA model. The result of this filtering process was a set of residuals or innovations that were free of serial correlation.

The residuals of each series were then used in the cross correlation procedure rather than the original data. Cross correlations were calculated for three and five lags in both positive and negative directions. This offered an opportunity to determine which series led the other and whether or not there was feedback or bidirectional causality.

The results indicated that farmgate prices led retail by about three weeks for both beef and pork. This was contrary to the expected results and may have been the result of cost plus pricing on the part of wholesalers and retailers. The live market is the only visible market in both the beef and pork channels, therefore it is hypothesized that firms further along the channels may have based their prices on a "cost plus" type of approach.

These results suggest that generally the pricing efficiency of the channels could be improved, since a theoretically price efficient channel should transmit price changes instantly. If price information is not relayed quickly the result could be the inefficient use of resources in the production and distribution of beef and pork. The results also suggest that the live market may be the principle point of price discovery for the entire channel and therefore any changes made at this level could have far reaching effects.

SOIL SCIENCE

COOK, F.D.

Inoculum for pulses

At the time that this study was undertaken all commercially available legume inoculant used in western Canada was imported from the U.S. While commercial sources are usually designed to nodulate legume crops and fix atmospheric nitrogen under a wide range of soil conditions, the practice of importation of inoculant has been questioned. Rice has isolated a strain of *R. meliloti* which appears to be superior to commercial strains in nodulation of alfalfa in the Peace River region of Alberta. The current study was undertaken to assess the efficacy of native or soil-borne populations of pulse root nodule bacteria amd compare them with imported commercial inoculant. The necessity of inoculation and its benefits were assessed in field studies on a Black Chernozem and on Gray Luvisol.

Effective *Rhizobium leguminosarum* persisted in Malmo silty clay loam at Ellerslie and in Breton loam at Breton in numbers great enough to effectively nodulate subsequent faba bean crops. Innoculation with a commercial faba bean inoculant may not be necessary on both Black Chernozems and Gray Luvisols which have already been successfully inoculated.

There was no evidence obtained from this study that native wild *R. leguminosarum* exists in Central Alberta in numbers and quality high enough to effectively nodulate the faba bean crop. Therefore inoculation in the first year that this crop is grown on a field is an important consideration. However, there seems to be little difficulty in establishing faba bean root nodule bacteria in Alberta Black Chernozems and Gray Luvisols, and once it is established it seems to be persistent and relatively mobile. Faba bean root bacteria from the Black Chernozem site was well adapted to nodulate and fix atmospheric nitrogen in the environment of the Gray Luvisol site.

In seeding a faba bean crop where none has previously been grown it may be sufficient to use soil from a previous successfully nodulated faba bean field as an inoculum, though there seems to be no advantage in this method over using commercial inoculant, except where the latter is not available or when its quality is suspect.

Failure of pea nodulation in 1978 may have resulted from competition by ineffective native *R. leguminosarum*. This observation points out the need for careful management of this crop and further research on the influence of environment and management practices on the pea-Rhizobium symbiosis.

VETERINARY MEDICINE

MAPLETOFT, R.J.

Induction of parturition in the cow using cloprostenol and dexamethasone in combination
(Bayvet)

Two studies were designed to investigate whether the simultaneous use of a combination of dexamethasone and prostaglandin in the cow would be more predictable in the induction of parturition than either hormone used alone. In Experiment I all 19 cows treated with this combination calved within 72 hours whereas treatment with either hormone individually each resulted in two induction failures. No control cows calved during the first 72 hours after treatment. The incidence of retained placenta ranged from 19 to 53% in induced groups whereas there was no retained placenta in the control group. In experiment II all 30 cows treated with the hormone combination calved within the 72 hour limit. Twenty-six of 31 cows injected once with prostaglandin calved within 72 hours and 29 of 33 injected twice with prostaglandin calved within 72 hours. Five of the 34 control cows calved within 72 hours of time of treatment. Incidence of retained placenta was again high in induced cows. Results indicate that the simultaneous administration of prostaglandin and dexamethasone in combination does not constitute a safe, reliable and effective method of inducing parturition in the cow.

RAWLINGS, N.C.

Investigation of the endocrinology and physiology of blastocyst implantation in the ewe.
(Canadian Association of Animal Breeders)

One of the major sources of loss of productivity in animal production is infertility, especially early embryonic mortality. It has been suggested that hormones called prostaglandins play a critical role in controlling the establishment of pregnancy. Concentrations of prostaglandins E and F were measured in the embryo or fetus, extra embryonic of fetal membranes, uterine tissue and plasma collected from ewes up to 55 days of pregnancy. Our data suggests that a change in the pattern of prostaglandin F secretion, but not a decrease in overall levels, is critical to the initial establishment of pregnancy. An increase in prostaglandin F levels is also critical. Prostaglandins are produced by the embryo/fetus, extraembryonic/fetal membranes and uterus during early pregnancy. A role for prostaglandins F and E in fetal, placental and uterine growth is suggested; placental and uterine endocrine function may also be targets.

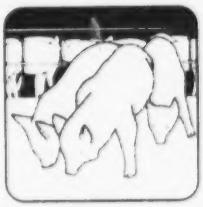
CONTINUING GRANTS

Date following title identities Annual Report in which project description appears

AGRICULTURAL ENGINEERING

RAPP, E.
Evaluating drainage feasibility of some Alberta soils (1972-1973)

RAPP, E.
Irrigation scheduling for supplemental irrigation in central and northern Alberta (1979-1980)



ANIMAL SCIENCE

AHERNE, F.X.
A study of the potential of increasing the reproductive efficiency of gilts (1983-1984)

BERG, R.T.
Influence of selection for growth on maternal traits of mice (1982-1983)

BERG, R.T., M.A. PRICE, R.T. HARDIN
Strategies for beef cattle improvement (1980-1981)

MATHISON, G.W.
Evaluation of aspen as a feedstuff for ruminants (1983-1984)

MATHISON, G.W.
Effect of Bovatec on the energetic efficiency of cattle (1983-1984)

MILLIGAN, L.P., P.M. KENNEDY
Effects of soluble and bypass protein supplements on intake and utilization of straw (1981-1982)

MILLIGAN, L.P., P. KENNEDY
Methods of protection of canola meal (1982-1983)

SAUER, W.C.
Lysine requirements of starting pigs (1981-1982)

SAUER, W.C.
The biological availability of biotin in feedstuffs for pigs (1983-1984)

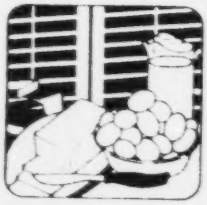
SHIRES, A.
Effects of variable levels of dietary protein and energy, and periods of feeding on the rate of growth and carcass composition of meat-type chickens (1982-1983)

THOMPSON, J.R., F.X. AHERNE
Etiology of development of leg weakness in swine (1981-1982)

FOOD SCIENCE

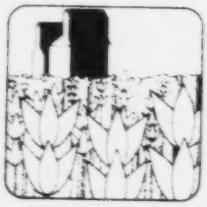
LEMAGUER, M.
Determination of the surface properties of biologically active immobilzed molecules (1983-1984)

WOLFE, F.H.
Calcium activated neutral protease levels in PSE pork muscle (1983-1984)



HOME ECONOMICS

HAWRYSH, Z.J.
Quality of restructured beef (1983-1984)



PLANT SCIENCE

HIRUKI, C.
Serological and anatomical studies on plant mollicute diseases with special reference to their diagnostic value (1979-1980)

HIRUKI, C.
Evaluation and development of practical diagnostic procedures for potato spindle tuber viroid diseases in Alberta (1982-1983)

KNOWLES, R.H.
The behaviour of turfgrass growing on minimal medium in response to irrigation and nutritional inputs (1980-1981)

TOOP, E.W.
Selection of Begonia lucerna crosses for mass production as compared to potted plants (1983-1984)

VANDEN BORN, W.H.
Biology and control of cleavers (Galium aparine) (1981-1982)

WALTON, P.D.
The combining ability of alfalfa clones (1983-1984)

RURAL ECONOMY

BAUER, L.
An economic analysis of land ownership versus land leasing arrangements connected with livestock production in Alberta (1983-1984)

LEROHL, M.L.
Effects of domestic grain grades on the operating efficiency of Canada's west coast terminal elevators (1983-1984)

PETERSEN, T.A.
Analysis of farm leases and rental arrangements in Alberta (1980-1981)

RICHTER, J.J.
The European agricultural export subsidy and prospects for the Canadian grain trade (1981-1982)

SCHULTZ, W.M.
Financial planning models for Alberta farms (1981-1982)

SOIL SCIENCE

MacHARDY, F.V., F.D. COOK
Measurement of photosynthate requirement for nitrogen fixation by selected free-living microorganisms found in Alberta soils (1977-1978)

MacHARDY, F.V.
Assessment of nitrogen contribution to cereals by intercropping with annual legumes (1977-1978)

McGILL, W.B.
Acid phosphatase production in relation to plant-available P (1981-1982)

NYBORG, M.
Big pellets and deep bands (1983-1984)

NYBORG, M.
Conversion of thiosulphate and sulphur emulsion to sulphate (1983-1984)

NYBORG, M.
Elemental sulphur and nitrogen fertilizers (1983-1984)

PLUTH, D.J.
Productivity ratings for soil types in Edson and Whitecourt map areas (1968-1969)

PLUTH, D.J.
Nutrient distribution and cycling in selected forest ecosystems (1968-1969)

ROBERTSON, J.A.
Factors affecting potassium availability in central Alberta soils (1982-1983)

WEBSTER, G.R.
Testing of a revised soil-moisture budget (1978-1979)

INTERDISCIPLINARY

ANDREW, W.T., K.W. DOMIER
The integration of seed pieces, cutters and planters for better plant stands in potato fields (1977-1978)

BERG, R.T., Z.J. HAWRYSH, M.A. PRICE
Assessment of optimum slaughter weight and condition in beef cattle (1979-1980)

CLEGG, L.F.L., W.T. ANDREW
Fertilizer and trace element studies (1974-1975)

DOMIER, K.W., W.T. ANDREW
A systematic study of potato cutters, seed pieces and planters (1980-1981)

ROBERTSON, J.A., K.W. DOMIER
Factors affecting P fertilizer utilization in tilled and untilled soils (1982-1983)

UNIVERSITY OF BRITISH COLUMBIA

COPEMAN, R.J.
Serological detection methods for Corynebacterium sepedonicum (1977-1978)

WESTERN COLLEGE OF VETERINARY MEDICINE

BARTH, A.D.
A study of fertilization rates of semen from bulls with various levels of specific sperm defects (1983-1984)

FORSYTH, G.W.
Control of intestinal secretion in Colibacillosis in pigs (1978-1979)

GUDMUNDSON, J., M.E. SMART
A survey of trace mineral metabolism in purebred and percentage simmental cattle (1978-1979)

RAWLINGS, N.
The development and application of controlled breeding and artificial insemination in sheep (1982-1983)

STOCKDALE, P.H.G.
Immunological control of shipping fever in cattle (1979-1980)

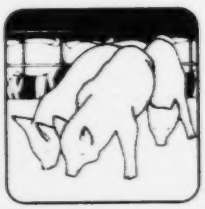
AGRICULTURAL ENGINEERING

HARRISON, H.P.

Investigation of a bent legged plow

There is an increase in continuous cropping on the prairies with the reduction in conventional tillage. This change in cultural practice requires a tillage implement that can till to a depth greater than the plow pan but leave the surface largely undisturbed. Furthermore, the implement is to band fertilizer—either granular or liquid. The bent leg plow fractures the soil with a minimum draft and surface disturbance. With some modifications the bent shaft plow may have a use on prairie farms.

ANIMAL SCIENCE



AHERNE, F.X.

The effects of energy and protein intake after weaning on the reproductive performance of sows

The objective of this study is to determine the effects of energy and protein intake between weaning and breeding on sow weight loss, time to return to estrus, conception rate and subsequent reproductive performance.

AHERNE, F.X.

The effect of flavour additives on the utilization of canola meal by starting pigs 4-8 weeks of age

Our previous studies have shown that for each one percent addition of canola meal to the diets of young pigs, average daily gain and average daily feed intake are reduced by 2 and 4 grams, respectively. This relationship ($P<0.001$) resulted in a significant decrease in pig performance when canola meal replaced 50 percent or more protein supplied by soybean meal. Since the decrease in pig performance noted when canola meal is included in the diet of starting pigs appears to be associated with decreased feed intake, it is important to determine whether or not this observed reduction in feed intake is caused by a low palatability of canola meal.

SAUER, W.C.

Evaluation of the nutritive value of canola meal for pigs by aid of the modified nylon bag technique

The objective of this study is to determine, by aid of the modified nylon bag technique, the digestible energy and available amino acid supply in samples from meals of new canola varieties and samples from meals of canola varieties with promising genetic potential.

THOMPSON, J.R.

Collagen cross-bridging and the role of prostaglandins in the development of normal and diseased pig joint cartilage

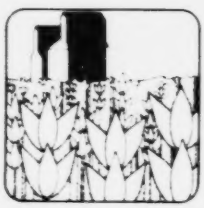
The objectives of this study are to measure the development of intermolecular cross-bridges in collagen in normal and diseased joint cartilage, and to determine the role that prostaglandins play in connective tissue metabolism in normal and diseased joint cartilage. These measurements will further our understanding of growth and development of normal and diseased joint cartilage and provide information required to develop possible preventive treatments to minimize leg weakness in pigs.

FOOD SCIENCE

OORAIKUL, B.

Food sauces from canola meal

The objectives of this study are to investigate the use of enzymes to prehydrolyse canola meal prior to microbial fermentation in the production of a soy sauce-like product in order to minimize the time and cost of production, and to study the roles and sequences of microbial fermentation. Success of these studies would provide a new way to utilize canola meal as a human food and reduce importation of soy sauce and related products.



PLANT SCIENCE

KONDRA, Z.P.

Clonal propagation of canola

Hybrid vigor in Polish-type canola (B. campestris L.) could be exploited through F1 hybrid varieties on synthetic varieties which must be developed by 'combining ability' testing. Self-compatability and inbreeding depression deter the production of adequate hybrid populations for 'combining ability' testing. Clonal propagation would provide the mechanisms for developing hybrid populations.

RURAL ECONOMY

HAWKINS, M.H.

Transportation costs for Alberta hogs

The objective of the study is to evaluate the efficiency of establishing transportation rates for hogs in Alberta. In addition, a transportation model will be developed to compare current and historical rates with a competitive norm.

VETERINARY MEDICINE

MURPHY, B.D.

Improving production by increasing embryo survival in mink

The objective of the proposed study is to determine means of manipulating the hormone output of the pituitary gland and the ovary of the mink with the overall goal of controlling the time of implantation of the embryos. By abbreviating the gestation which precedes implantation, during which the embryos are free in the uterus, embryonic mortality can be reduced. Embryonic loss significantly reduces production in most domestic animals including cow, sow, ewe and mare as well as the mink. The hormone factors which control embryonic implantation have not been determined in any of these species, and understanding of this process is important to maximizing economic gain from animal husbandry.

VAN DEN HURK, J.

Field testing of a cell culture grown vaccine for hemorrhagic enteritis of turkeys

Hemorrhagic enteritis is a virus disease of turkeys which commonly affects poults from 5-8 weeks of age and causes reduced weight gain, feed conversion and slaughter grades in addition to death.The disease can be prevented by vaccination, however, commercial vaccines are not available because the virus could not be grown in cell culture until recently. In the past year we have developed a method to grow the virus in cell culture and have done some preliminary vaccine studies. The objective for the coming year is to test the hemorrhagic enteritis vaccine in cell culture in the field. This information must be provided to Agriculture Canada in order to have the vaccine licensed for sale in Canada.

CONTRIBUTIONS
from sources listed are gratefully acknowledged
April 1, 1983-March 31, 1984

Alberta Broiler Growers Marketing Board
Alberta Cattle Commission
Alberta Pork Producers Marketing Board
Alberta Water Resources Commission
Alberta Wheat Pool
Canadian Mink Breeders Association
Canadian Turkey Marketing Agency
Canola Council of Canada
Cecil Delworth Foundation — Flowers Canada
Chembiomed Limited
Cominco Limited
Esso Resources Canada Limited
George Cringle — Palm Dairies Research Foundation
Hoffman - Laroche Limited
I & S Produce Limited
Morris Rod Weeder
Potash Corporation of Saskatchewan
Potash and Phosphate Institute
Western Co-operative Fertilizers Limited

Total $181,802.00*

*Includes contributions in-kind such as chemicals, laboratory and field supplies, labour, etc.

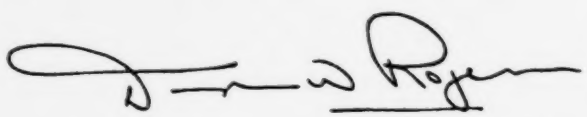
ALBERTA AGRICULTURAL RESEARCH TRUST
FINANCIAL STATEMENTS
MARCH 31, 1985

AUDITOR'S REPORT

To the Trustees of the
Alberta Agricultural Research Trust

I have examined the balance sheet of the Alberta Agricultural Research Trust as at March 31, 1985 and the statement of revenue, expenditure and unexpended funds for the year then ended. My examination was made in accordance with generally accepted auditing standards, and accordingly included such tests and other procedures as I considered necessary in the circumstances.

In my opinion, these financial statements present fairly the financial position of the Trust as at March 31, 1985 and the results of its operations for the year then ended in accordance with generally accepted accounting principles applied on a basis consistent with that of the preceding year.



F.C.A.
Auditor General

Edmonton, Alberta
August 14, 1985

	1985
Current:	
Deposits in trust (Note 3)	$ 260,909
Research grants recoverable	
	$ 260,909

Current:	
Research grants payable	$ 36,026
Administration charges payable	2,710
Unexpended funds	222,173
	$ 260,909

The accompanying notes are part of these financial statements.

	1985
Contributions from the Province of Alberta, Department of Agriculture	$ 250,000
Contributions from industry	181,802
Interest	37,230
	$ 469,032
Research Grants	$ 404,511
Administration charge	26,463
	430,974
Excess of revenue over expenditure	38,058
Unexpended funds at beginning of year	184,115
Unexpended funds at end of year	$ 222,173

ALBERTA AGRICULTURAL RESEARCH TRUST
NOTES TO THE FINANCIAL STATEMENTS
MARCH 31, 1985

Note 1 Authority

The Alberta Agricultural Research Trust operates under the authority of the Alberta Agricultural Research Trust Act, Chapter A-14, Revised Statutes of Alberta 1980.

Note 2 Significant Accounting Policies

General

Research grants are recorded in these financial statements when approved for payment to researchers' accounts. Unexpended balances of grant funds held in researchers' accounts are not reflected in these financial statements.

Changes in Financial Position

A statement of changes in financial position is not provided as disclosure in these financial statements is considered to be adequate.

Note 3 Deposits in Trust

Deposits in trust consist of deposits in the Consolidated Cash Investment Trust Fund of the Province of Alberta.

Note 4 Contributions from Industry

The Trust receives gifts in kind from industry which are not reflected in these financial statements. During the year, gifts in kind received by the Trust were estimated to amount to $7,300.

Note 5 Approval of Financial Statements

These financial statements were approved by management.